

AMENDMENTS TO THE CLAIMS

Please replace all prior claims in the application with the following listing of claims:

Listing of Claims:

1-31. (canceled)

32. (currently amended) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:

- containing in a first container a first body of a solution including dissolved metal;
- maintaining a second body of the solution in a second container ~~in fluid communication with the first container~~, the dissolved metal of the second body having a concentration;
- isolating the second container from the first container;
- circulating the second body at a turbulent flow velocity through an electrolyzer in a first circulation loop;
- electrolyzing a portion of the dissolved metal of the second body in the electrolyzer;
- sensing the concentration; and
- ~~exchanging solution between the first and second containers responsive to the sensed concentration,~~
- opening one or more flow paths between the second container and the first container, and
- circulating a portion of the first body and a portion of the second body at a turbulent flow velocity through the electrolyzer in a second circulation loop.

33. (original) The method of claim 32 further comprising maintaining a temperature of the second body within a predetermined range.

34. (original) The method of claim 33 wherein the range is between about 25 degrees and about 65 degrees C.

35. (original) The method of claim 33 wherein the range is between about 40 degrees and about 55 degrees C.
36. (original) The method of claim 33 further comprising sensing the temperature of the second body, and wherein the maintaining step comprises exchanging the solution responsive to the sensed temperature.
37. (original) The method of claim 36 wherein the maintaining step comprises heating the second body responsive to the sensed temperature.
38. (original) The method of claim 36 wherein the maintaining step comprises cooling the second body responsive to the sensed temperature.
39. (currently amended) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:
containing in a first container a first body of a solution including dissolved metal;
maintaining a second body of the solution in a second container in fluid communication with the first container through valved ports, the dissolved metal of the second body having a concentration;
circulating the second body at a turbulent flow velocity through an electrolyzer in a first circulation loop;
electrolyzing metal in the second body in ~~an~~ the electrolyzer;
sensing the concentration;
~~if the sensed concentration falls within a predetermined range,~~
closing the ports; and
~~circulating the second body through the electrolyzer;~~
if the sensed concentration falls outside of ~~the~~ a predetermined range,
opening the ports; and
circulating ~~solution from the first container~~ the first body at a turbulent flow velocity through the electrolyzer in a second circulation loop.

40. (original) The method of claim 39 further comprising maintaining a temperature of the second body within a predetermined range.

41. (original) The method of claim 40 wherein the range is between about 25 degrees and about 65 degrees C.

42. (original) The method of claim 40 wherein the range is between about 40 degrees and about 55 degrees C.

43. (currently amended) The method of claim 40 39 further comprising sensing the a temperature of the second body, and ~~wherein the maintaining step comprises exchanging the solution responsive to the sensed temperature~~
if the sensed temperature falls outside of a predetermined range,
opening the ports; and
circulating the first body at a turbulent flow velocity through the electrolyzer in
the second circulation loop.

44. (original) The method of claim 43 wherein the maintaining step comprises heating the second body responsive to the sensed temperature.

45. (original) The method of claim 43 wherein the maintaining step comprises cooling the second body responsive to the sensed temperature.

46. (previously presented) The method of claim 33 further comprising maintaining the temperature by immersing a cooling coil at least partially within the second body.

47. (previously presented) The method of claim 33 further comprising maintaining the temperature by immersing a heating element at least partially within the second body.

48. (currently amended) The method of claim 32 wherein the ~~exchanging~~ first circulating step further comprises circulating the ~~solution between the first and second containers~~ second body through the electrolyzer by means of a pump.

49. (currently amended) The method of claim 48 wherein the second circulating step further ~~comprising~~ comprises circulating the ~~solution~~ second body ~~through an inlet~~ between the first container and the pump, and ~~through an outlet~~ between the pump and the second container.

50. (currently amended) The method of claim 48 wherein the second circulating step further ~~comprising~~ comprises circulating the solution to the pump through a tempering valve having first and second valve inlets, the first valve inlet in fluid communication with the first container and the second valve inlet in fluid communication with the second container.

51. (currently amended) The method of claim 32 wherein the ~~exchanging~~ second circulating step further comprises returning the solution from the second container to the first container by means of an outlet ~~dump~~ valve.

52. (previously presented) The method of claim 32 wherein the dissolved metal is in a form of one or more oxides of the metal.

53. (previously presented) The method of claim 32 wherein the solution comprises a reaction product of an electrochemical reaction in a metal/air fuel cell.

54. (previously presented) The method of claim 32 wherein the dissolved metal is zinc.

55. (previously presented) The method of claim 32 wherein the solution comprises an aqueous solution.

56. (previously presented) The method of claim 55 wherein the aqueous solution comprises dissolved electrolyte and a suspension of metal oxide.

57. (currently amended) The method of claim 32 wherein the ~~exchanging~~ second circulating step maintains the concentration between about 0.5M and 4.0M.

58. (currently amended) The method of claim 32 wherein the ~~exchanging~~ second circulating step maintains the concentration between about 1.0M and 2.5M.

59. (currently amended) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:

containing in a first container a first body of a solution including dissolved metal, ~~the dissolved metal of the first body having a concentration;~~

~~maintaining a second body of the solution in a second container in fluid communication with the first container, the dissolved metal of the second body having a second concentration;~~

isolating the second container from the first container;

circulating the second body at a turbulent flow velocity through an electrolyzer in a first circulation loop;

electrolyzing a portion of the dissolved metal of the second body in the electrolyzer;

sensing the first concentration;

~~sensing the second concentration; and~~

~~exchanging solution between the first and second containers responsive to if the sensed concentration~~ drops below a low-concentration set point,

opening one or more flow paths between the second container and the first container, and

circulating a portion of the first body and a portion of the second body at a turbulent flow velocity through the electrolyzer in a second circulation loop;

if the sensed concentration exceeds a high-concentration set point,

closing the one or more opened flow paths between the second container and the first container, and

circulating the second body at a turbulent flow velocity through the electrolyzer in the first circulation loop.